LaTeX packages

February 17, 2022

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1 Section

Dummy text

1.1 Subsection

Dummy text

2 Another Section

Dummy text

This part can be used with package 'amsmath'

$$f(x) = x^2$$

This part can be used with package 'graphicx'



Figure 1: LaTeX figure

For subfigures, package 'subcaption' is needed



Figure 2: Two subfigures

3 Tables

Normal table

| A | В | С |
|------|--------|------------------------|
| L | С | R |
| left | center | right |
| 1 | 2 | 3 |
| 1.01 | 2.02 | 3.03 |
| 1.1 | 2.002 | 3.003 |

booktabs

| В | С |
|--------|------------------------|
| С | R |
| center | right |
| 2 | 3 |
| | C |

Aligned decimal

| 1.000 | 2.000 | 3.000 |
|-------|-------|-------|
| 1.010 | 2.020 | 3.030 |
| 1.100 | 2.002 | 3.003 |

multirow table

| A | С | R R |
|-----------|--------|--------|
| L left | center | right |
| 1 | | 2 |

longtable

| A | В | С |
|------|---|-------|
| L | С | R |
| left | center | right |
| 1 | 2 | 3 |
| 2 | $\begin{array}{c c} 2 \\ 2 \end{array}$ | 3 |
| 3 | 2 | 3 |
| 4 | 2 | 3 |
| 5 | 2 2 2 2 2 2 2 2 | 3 |
| 6 | 2 | 3 |
| 7 | 2 | 3 |
| 8 | 2 | 3 |
| 9 | 2 | 3 |
| 10 | 2 | 3 |
| 11 | 2 | 3 |
| 12 | 2 | 3 |
| 13 | 2 2 2 2 2 | 3 |
| 14 | 2 | 3 |
| 15 | 2 | 3 |
| 16 | 2 | 3 |
| 17 | 2 | 3 |

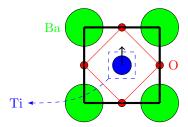
| A | В | С |
|------|--------|-------|
| L | С | R |
| left | center | right |
| 18 | 2 | 3 |
| 19 | 2 | 3 |
| 20 | 2 | 3 |
| 21 | 2 | 3 |
| 22 | 2 | 3 |
| 23 | 2 | 3 |
| 24 | 2 | 3 |
| 25 | 2 | 3 |
| 26 | 2 | 3 |
| 27 | 2 | 3 |
| 28 | 2 | 3 |
| 29 | 2 | 3 |
| 30 | 2 | 3 |

| C | R right 3 |
|---|------------------|
| В | C center 2 |
| A | L left 1 |

Autogenerated csv table

| Step | Temp. | $\overset{u_x}{\text{Å}}$ | $^{u_y}_{\rm \AA}$ | u_z Å |
|--------------------------|--------------------|---|--|-----------------|
| 0000020000 0000025000 | 360.000 360.000 | $0.139 \times 10^{-3} \\ -0.564 \times 10^{-3}$ | -0.488×10^{-3} 0.698×10^{-3} | -0.152 -0.152 |

4 Drawing



These are citations 1 and Paul et al. ("Ferroelectric Phase Transitions in Ultrathin Films of BaTiO3", p. 1) using biblatex.

¹Nishimatsu et al., "Fast molecular-dynamics simulation for ferroelectric thin-film capacitors using a first-principles effective Hamiltonian", p. 2.

References

Nishimatsu et al.: Fast molecular-dynamics simulation for ferroelectric thin-film capacitors using a first-principles effective Hamiltonian PhysRevB.78.104104

Takeshi Nishimatsu et al. "Fast molecular-dynamics simulation for ferroelectric thin-film capacitors using a first-principles effective Hamiltonian". In: *Phys. Rev. B* 78 (10 2008), p. 104104. DOI: 10.1103/PhysRevB.78.104104. URL: https://link.aps.org/doi/10.1103/PhysRevB.78.104104.

Paul et al.: Ferroelectric Phase Transitions in Ultrathin Films of $BaTiO_3$ PhysRevLett.99.077601

Jaita Paul et al. "Ferroelectric Phase Transitions in Ultrathin Films of BaTiO₃". In: *Phys. Rev. Lett.* 99 (7 2007), p. 077601. DOI: 10.1103/PhysRevLett.99.077601. URL: https://link.aps.org/doi/10.1103/PhysRevLett.99.077601.